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The Ohio Poultry House

Working Plans and Bill of Material for 150-Fowl Poultry House

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The Ohio Poultry House

The purpose of this bulletin is to offer working drawings of a poultry house which has met with marked success on Ohio farms. All the essentials necessary for the proper sheltering of the flock have been incorporated in this house.

Wherever possible, the house should have a south, east, or southeast exposure, to ensure the greatest amount of sunlight during cold weather. The house should be no larger than necessary, yet it never pays to crowd the fowls. The plans show a house 20 by 30 feet, accommodating 150 birds. If a larger or smaller flock is desired, the length can be changed to provide the necessary floor space. Allow 4 square feet per bird.*

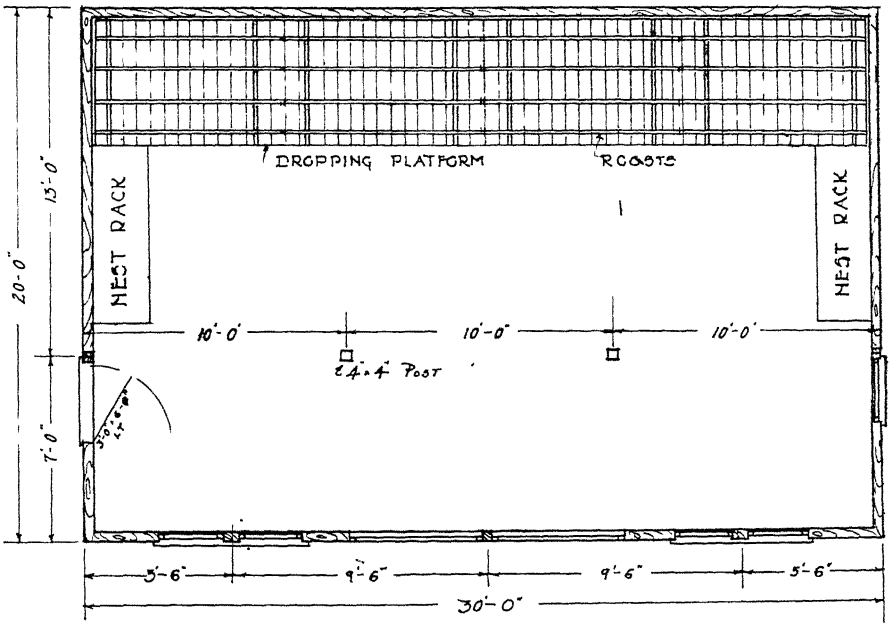
PREPARING THE FOUNDATION

The concrete foundation and floor offer assurance of durability and dryness. Concrete is permanent, easy to keep clean, sanitary, and rat proof. The foundation extends down below the frost line and up high enough to exclude surface water. If the ground around the house is not naturally well drained the tile shown at the foot of the foundation *(Framing section,* page 5) must not be omitted. Gravitational water retained beneath the floor would result in an upheaval in case of freezing. The rise of capillary water, which is the cause of cold, damp floors, is prevented by the 10-inch layer of crushed stone or gravel. The presence of the layer of tar paper *(Framing section,* page 5) is an additional assurance of a dry floor. The paper is carried up where the floor meets the foundation, and a 1-inch expansion and insulation joint of tar provided. Great care should be taken to provide a dry floor, as dampness is fatal to fertility and egg production.

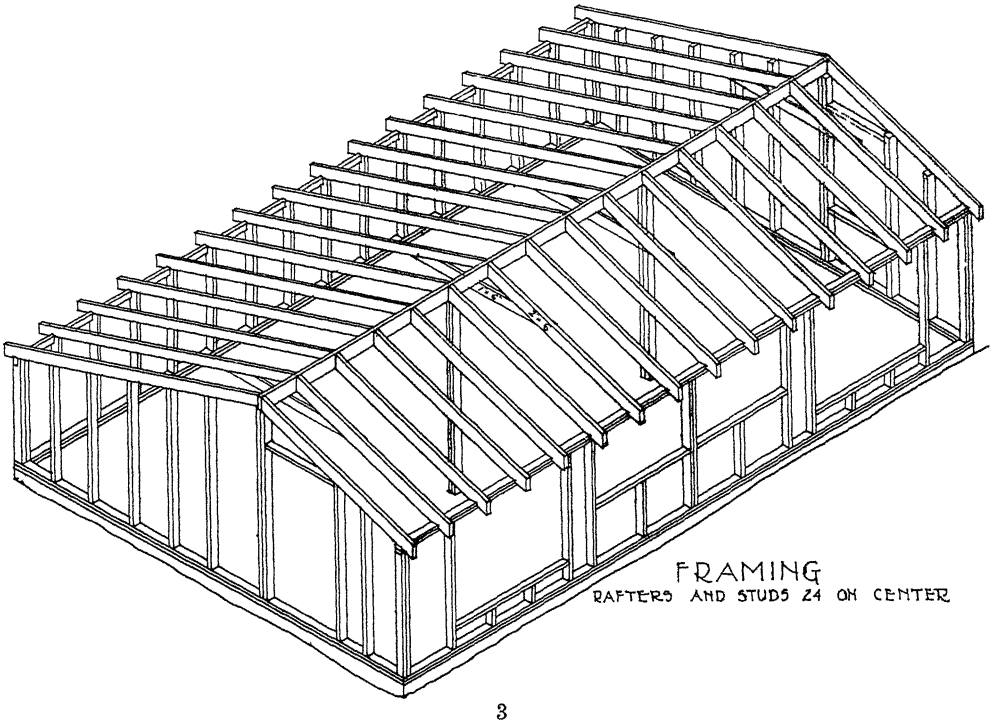
LAYING THE FLOOR

Usually the foundations, walls, and roof of the house are built before the floor is laid, so as to protect the setting concrete from the sun. The floor shown in the plan consists of a 3-inch layer of 1:2½:5 concrete with a ½-inch finishing coat of 1:2 concrete. This finishing coat provides a hard, smooth wearing surface, the smoothness being necessary to prevent the hens' toenails from breaking off. In case the builder desires a one-course floor, 1:2:3 concrete should be used as a nearly quaky mixture; and to facilitate finishing, coarse aggregate should not be larger than 1 inch in greatest dimensions.

* Dimensions given thruout are for American breeds. For the smaller breeds, as Leghorns, allow 3 square feet per bird. The house would then accommodate 200 hens.



FLOOR PLAN

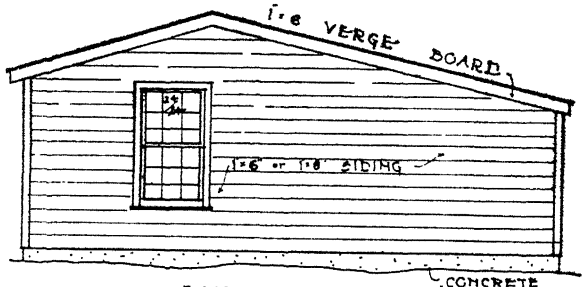


FRAMING

RAFTERS AND STUDS 24 ON CENTER

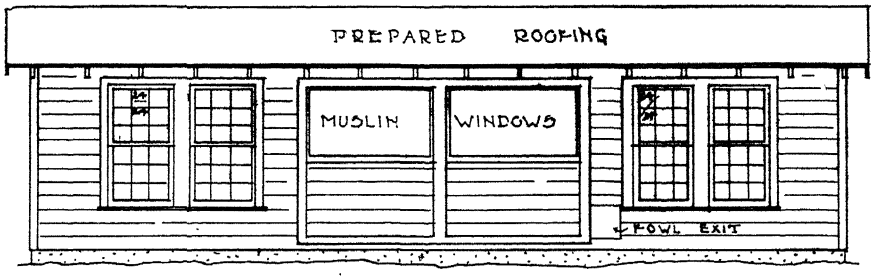
STRUCTURAL DETAILS

The sill is bolted to the foundation. A single 2- by 4-inch sill will be found sufficient if it is securely bolted at intervals of from 6 to 8 feet. The roof sheathing is laid upon 2- by 6-inch rafters with tarred felt building paper between. Due to the heavy snow load resulting from the flatness of the roof and the length of the span, nothing less than 2- by 6-inch rafters spaced 2 feet on center



END ELEVATION

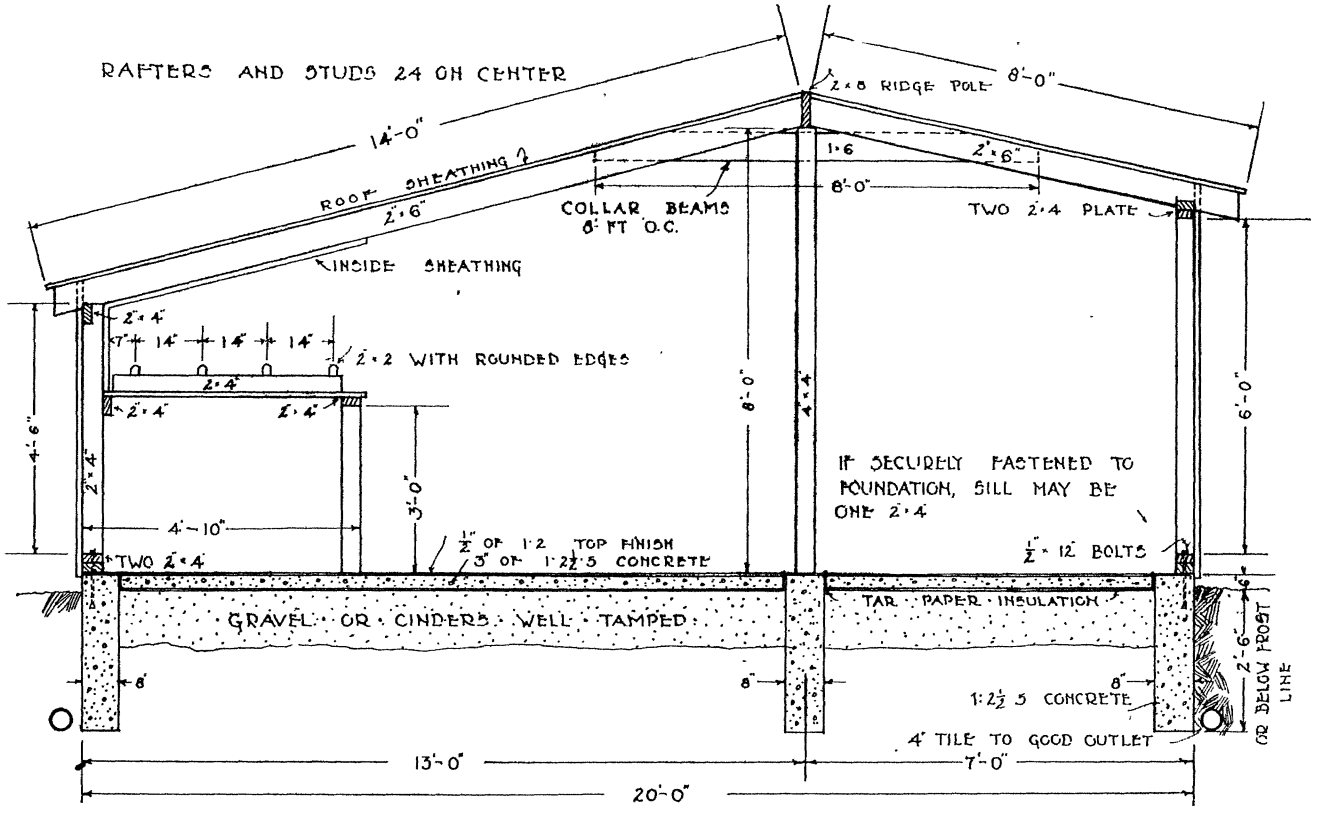
should be used *(Framing,* page 3). If this is not adhered to the roof will sag in time. The roof covering may be a good grade of tar or asphalt paper. The walls consist of 2- by 4-inch studs upon which are laid tarred felt building paper and drop siding. The walls should be tight to provide a dry, draftless house.



FRONT ELEVATION
HOUSE FACE SOUTH, EAST OR SOUTH-EAST

VENTILATION

This house has been designed to provide good ventilation without draft. The principal source of ventilation is thru the cloth windows, of which two types are shown *(Types A and B,* page 9). Additional ventilation is necessary during hot weather and for the purpose of quickly drying out the house after a period of damp weather. This additional ventilation is secured by the ventilator in the rear wall *(Rear Ventilator,* page 7). This permits the cir-



FRAMING SECTION

culation of air thru the house above and below the fowls but not across them. The inner sheathing *(Illustration,* page 7) and the dropping boards protect the roosting hens from any draft. The inner vent door should not be opened except in very hot weather.

The freezing of the combs of the chickens results largely from the high moisture content of the air, and if good ventilation is provided, freezing of combs will not occur even in very cold weather.

The double-hung windows *(Front Elevation,* page 4) offer another source of fresh air and admit the required amount of sunlight. The door may also be glazed. Both door and windows should be as high up as possible to permit easy opening when the floor is thick with straw.

INTERIOR FIXTURES

Ease of disinfection and cleaning has been accomplished by making all interior fixtures accessible, simple in construction, few in number, and removable. The roosts can be lifted off the dropping platform for ease in cleaning. Nests are convenient for the gathering of eggs and for cleaning.

Two methods of nest arrangement are shown. Type A, illustrated in Section detail on page 7, shows the nests built under the dropping board. The great disadvantages of this method are that the nests shut off the light from the back of the house, and also make it inconvenient for catching the fowls.

Type B, shown on page 8, is the style recommended by the Department of Poultry Husbandry. It is more sanitary, as the entire nest rack can be moved about, making spraying easier; it is more economical of floor space *(see Floor Plan,* page 3) ; and also affords greater nesting space, each nest rack being built to hold 15 nests.

In both types, the nests themselves are a box framework which is not nailed to the platform upon which it rests but is removable. The back of the framework pulls the straw out as it is drawn forward. When the nest framework is entirely removed, spraying is made easy.

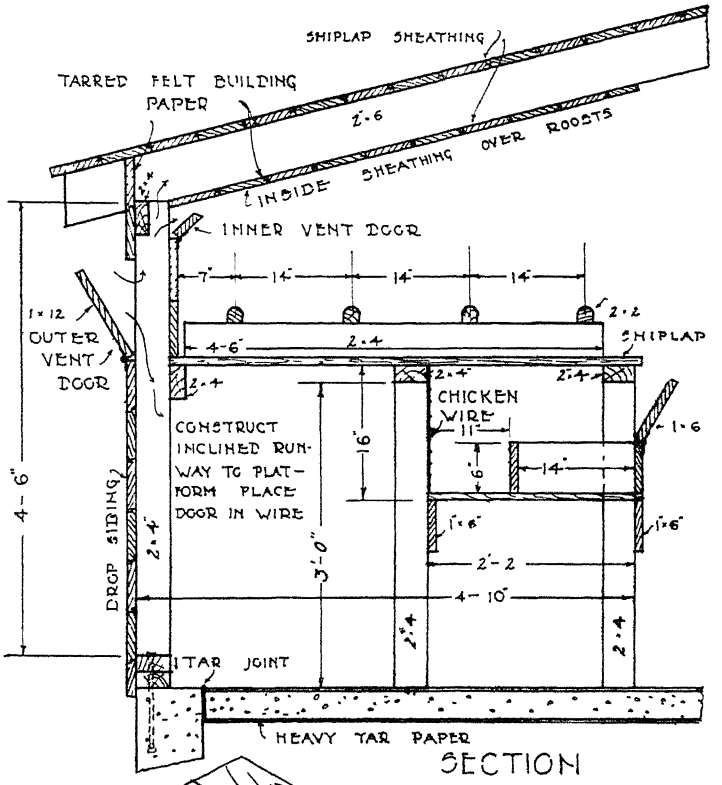
SUMMARY OF DETAILS TO BE OBSERVED

The owner should observe the following requirements in building the house:

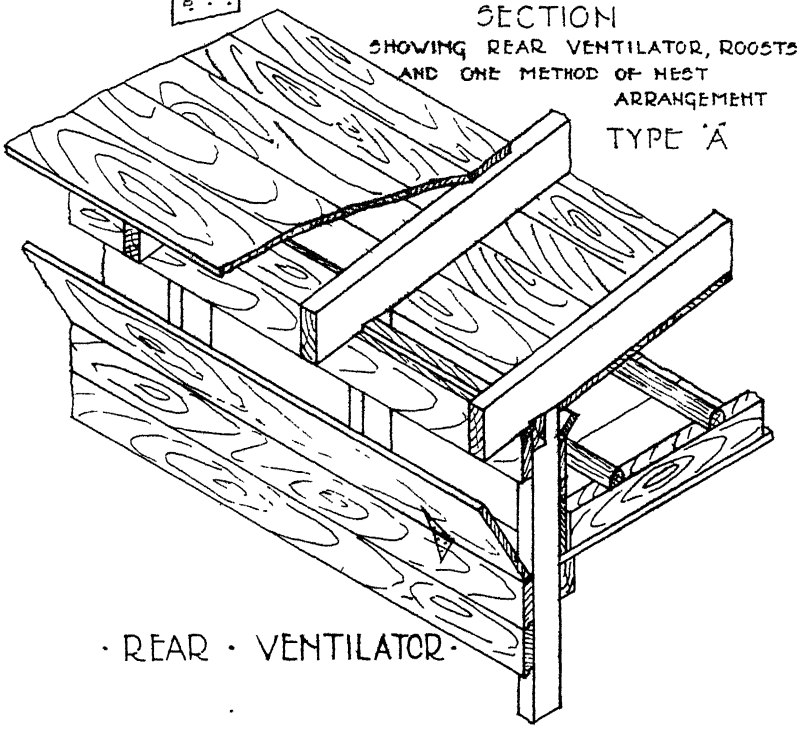
4 square feet of floor space per bird.

8 inches of roost length per bird; roosts 14 inches apart.

About 1 square foot of glass area per 18 square feet of floor area.



SECTION
SHOWING REAR VENTILATOR, ROOSTS AND ONE METHOD OF NEST ARRANGEMENT
TYPE 'A'



· REAR · VENTILATOR ·

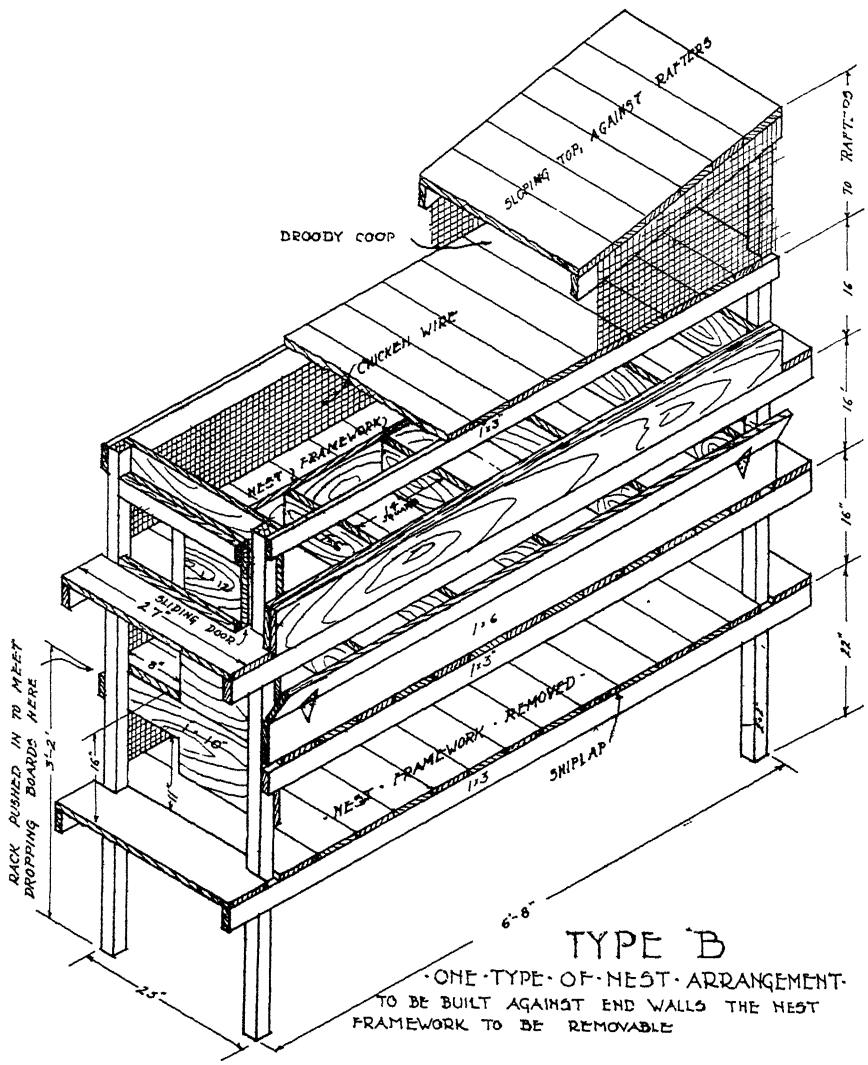
Nests 14 inches square, 6 inches deep, with 15 inches head room.

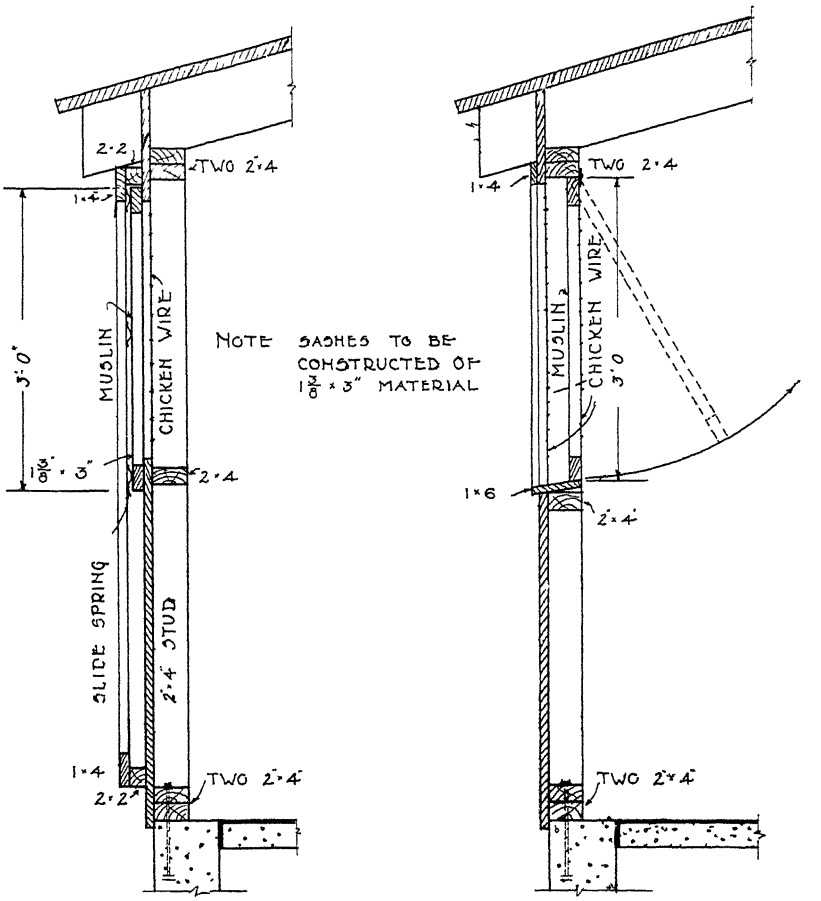
One nest to each six hens.

Make roosts and nest framework removable and of such lengths as are convenient to handle.

Windows and door as high up from floor as possible.

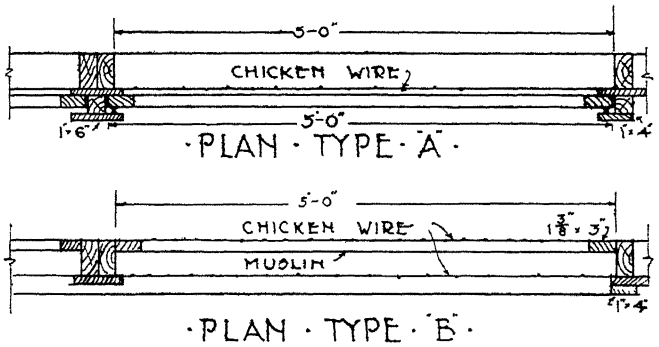
Provide broody coop, dust bath, water vessels, grain supply can, and partitions if desired.



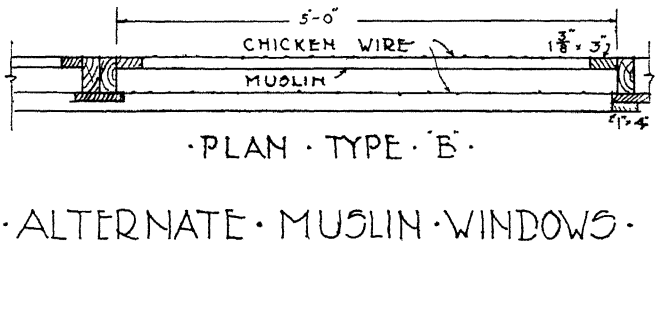


·SECTION·TYPE·A·
WINDOWS·SLIDE·UP·AND·DOWN·

·SECTION·TYPE·B·
WINDOWS-HINGED·TO·SWING·UP·



·PLAN·TYPE·A·



·PLAN·TYPE·B·

·ALTERNATE·MUSLIN·WINDOWS·

BILL OF MATERIAL

CONCRETE

Foundation and post footings (1:2½:5) total depth 3 feet, 8 inches thick:

Concrete cubage	205 cu. ft.
Cement	37 sacks
Sand	92 cu. ft.
Stone	185 cu. ft.

Floor (1:2½:5):

Concrete cubage	134 cu. ft.
Cement	24 sacks
Sand	61 cu. ft.
Stone	121 cu. ft.

Floor (1:2):

Cement cubage	23 cu. ft.
Cement	12 sacks
Sand	24 cu. ft.

Heavy tar paper: 7 rolls, 108 sq. ft. each—beneath concrete floor.
Gravel or cinders: 500 cu. ft.—as sub-base for floor.

FRAMING LUMBER

No. Pieces	*Size, Inches*	*Length, feet*	*Material*	*Use*
2	2 x 4	16	Cypress	Sill
2	2 x 4	14	Cypress	Sill
2	2 x 4	10	Cypress	Sill
3	2 x 4	12	Yellow pine	Plate
3	2 x 4	18	Yellow pine	Plate
5	2 x 4	18	Yellow pine	Rear wall studs, 4′ 6″ long.
6	2 x 4	12	Yellow pine	Front wall studs, 6′ 0″ long.
2	2 x 4	14	Yellow pine	End wall studs, various lengths.
2	2 x 4	18	Yellow pine	End wall studs, various lengths.
2	2 x 4	16	Yellow pine	End wall studs, 8′ 0″ long.
4	2 x 4	12	Yellow pine	Headers, various lengths.
2	2 x 4	16	Yellow pine	Posts, 8′ 0″ long.
2	1 x 6	16	Yellow pine	Collar beams, 8′ 0″ long.
3	2 x 8	10	Yellow pine	Ridge poles
16	2 x 6	14	Yellow pine	Rafters.
8	2 x 6	16	Yellow pine	Rafters, 8′ 0″ long.

MISCELLANEOUS LUMBER

800 feet B. M. 1″x8″ shiplap for roof sheathing
700 feet B. M. 1″x6″ drop siding
250 feet B. M. 1″x8″ shiplap for inside sheathing
160 feet B. M. 1″x8″ shiplap, in 14′ lengths, for dropping boards 4′ 8″ long
3 pieces 1″x12″x10′, for rear vent door
3 pieces 2″x 4″x16′, frame for dropping boards
2 pieces 2″x 4″x14′, frame for dropping boards
4 pieces 2″x 2″x16′, for roosts
4 pieces 2″x 2″x14′, for roosts
2 pieces 2″x 4″x18′, for roost rests 4′ 6″ long

NESTS, TYPE A

75 feet B. M. 1″x8″ shiplap, in 18′ lengths, for lower platform, pieces 2′ 3″ long
2 pieces 2″x4″x16′, framework for nests
1 piece 2″x4″x14′, framework for nests
7 pieces 1″x6″x16′, nests and framework
5 pieces 1″x6″x14′, framework for nests
4 pairs 3″ strap hinges
30 linear feet 18″ width 2″ mesh poultry netting

Note—The above bill of materials has been figured for nest sections in lengths of 6 nests each, approximately 8 feet long. Starting at one wall this would permit three full length sections and one fractional section of 4 nests, making a total of 22 nests.

NESTS, TYPE B

85 feet B. M. 1″x8″, shiplap in 18′ lengths
1 piece 2″x 2″x12′, for posts 6′ 0″ long
1 piece 2″x 2″x16′, for posts 8′ 0″ long
2 pieces 1″x 3″x14′
3 pieces 1″x 3″x16′
6 pieces 1″x 6″x14′
1 piece 1″x10″x12′
1 piece 1″x12″x 6′, for sliding doors
30 linear feet 18″ width 2″ mesh poultry netting
3 pairs 3″ strap hinges

Note—The above quantities are for one nest rack only.

MUSLIN WINDOWS, TYPE A

10 linear feet 36″ width 2″ mesh poultry netting
10 linear feet 36″ width muslin
34 linear feet 2″x2″
34 linear feet 1″x4″ trim
8 triangular pieces of galvanized sheet metal braces for corners of windows
or
8 angle bars *or*
8 corner braces
2 pieces 1⅜″x3″x16′, for sash of muslin windows
1 piece 1″x6″x6′, trim

MUSLIN WINDOWS, TYPE B

20 linear feet 36″ width 2″ mesh poultry netting
10 linear feet 36″ width muslin
6 T hinges, 3″
1 piece 1″x6″x16′, for sill and trim
1 piece 1″x4″x18′, trim
2 pieces 1⅜″x3″x16′, for sash of muslin windows
8 triangular pieces of galvanized sheet metal braces for corners of windows
or
8 angle bars *or*
8 corner braces

TRIM

2 pieces 1"x4"x16'
2 pieces 1"x4"x12'
2 pieces 1"x6"x14'
1 piece 1"x6"x18'
4 quarter rounds, 14' long } to be used as exterior finish where
3 quarter rounds, 16' long } roof and walls meet.

HARDWARE, PAPER, WINDOWS, DOOR, ETC.

8 rolls 108 sq. ft. each, 3-ply prepared roofing
900 sq. ft. tarred felt building paper
1 door, 3' 0"x6' 6", complete with frame, outside casing, lock, hinges. Door glazed if desired.
1 double-hung window 24"x24", complete with sash, frame, outside casing, weights and cords.
2 twin double-hung windows 24"x24", complete with sash, frame, outside casing, weights and cords.
30 linear feet, 2" mesh poultry netting for double-hung windows.
9 pairs 4" strap hinges, for outer vent door.
9 pairs 3" strap hinges, for inner vent door.
15 lbs. 6D nails.
40 lbs. 8D nails.
17 lbs. 10D nails.
8 lbs. 20D nails.
16 carriage bolts, ½"x12".

READ THIS BEFORE YOU BUILD!

Your county agent has a Book of Plans designed by the Department of Agricultural Engineering, showing drawings of various farm buildings, including general purpose and dairy barns, farm cottages, machine sheds, milk houses, garages, ice houses, etc.; also plans for concrete work—barnyards, stock tanks, etc. See this book, and choose your plan—then write to the Department of Agricultural Engineering for a blueprint of it.